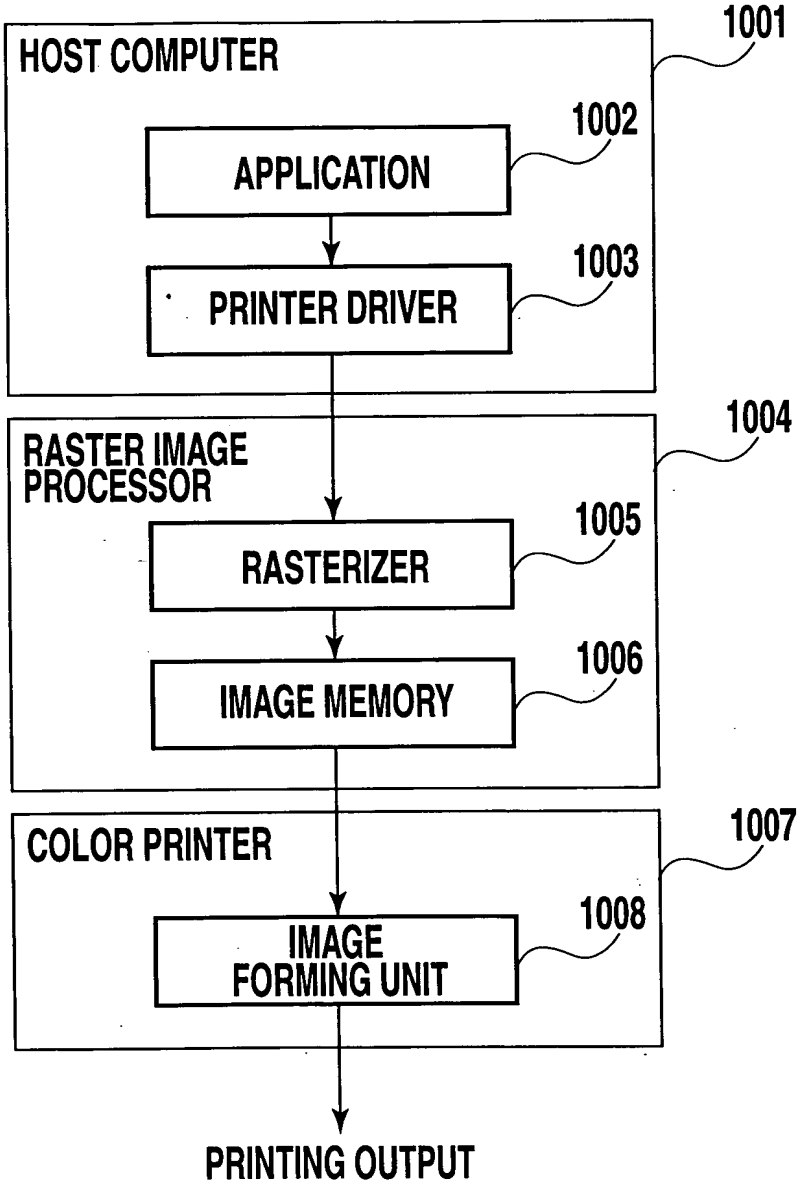
HOST COMPUTER
1001
APPLICATION
1002
PRINTER DRIVER
1003
RASTER IMAGE PROCESSOR
1004
RASTERIZER
1005
IMAGE MEMORY
1006
COLOR PRINTER
1007
IMAGE FORMING UNIT
1008
PRINTING OUTPUT

FIG.1

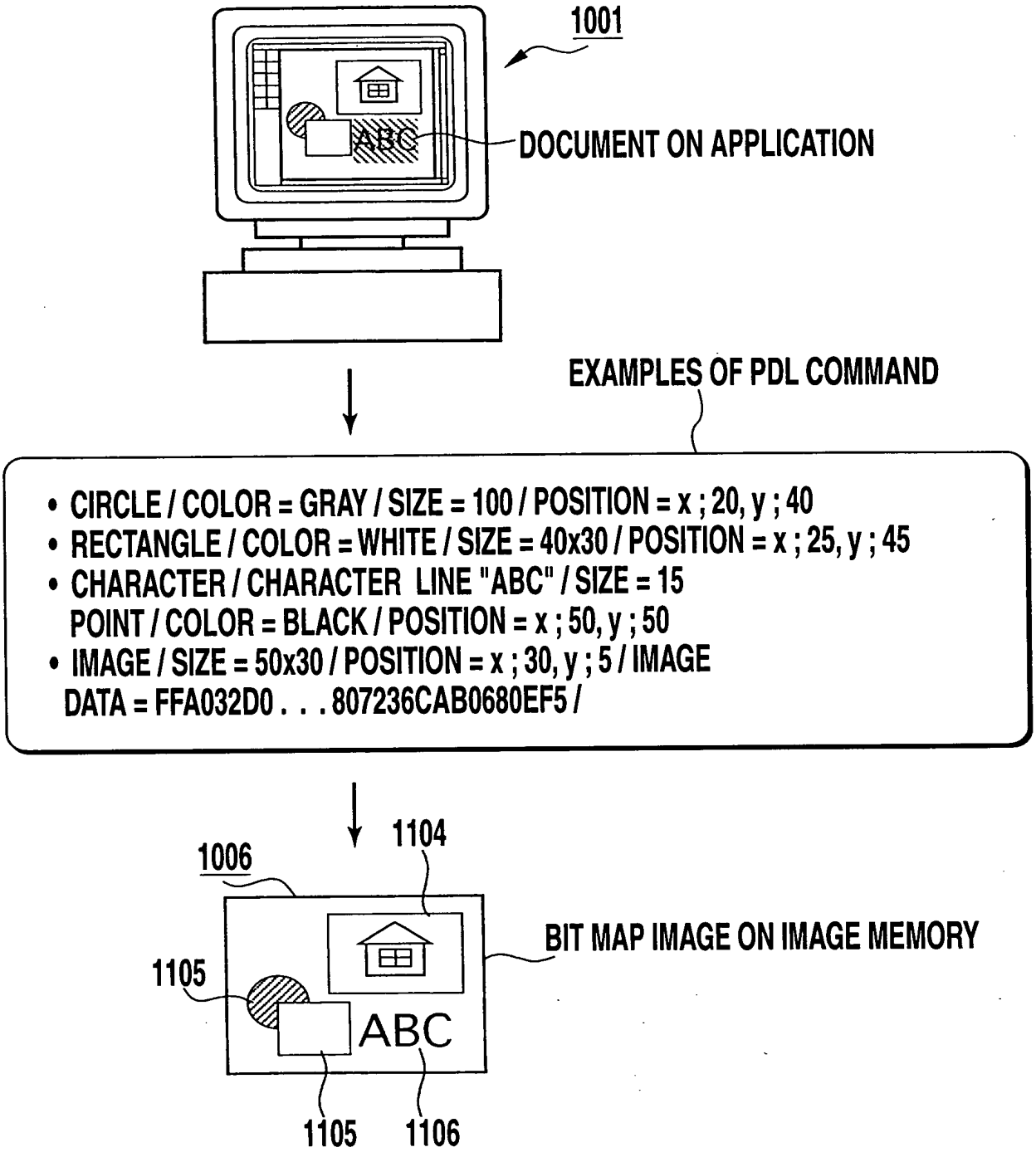
1001
ABC
DOCUMENT ON APPLICATION
EXAMPLES OF PDL COMMAND
• CIRCLE / COLOR = GRAY / SIZE = 100 / POSITION = x ; 20, y ; 40
• RECTANGLE / COLOR = WHITE / SIZE = 40x30 / POSITION = x ; 25, y ; 45
• CHARACTER / CHARACTER LINE "ABC" / SIZE = 15
POINT / COLOR = BLACK / POSITION = x ; 50, y ; 50
• IMAGE / SIZE = 50x30 / POSITION = x ; 30, y ; 5 / IMAGE
DATA = FFA032D0 . . . 807236CAB0680EF5 /
1104
1006
BIT MAP IMAGE ON IMAGE MEMORY
1105
ABC
1105
1106

FIG.2

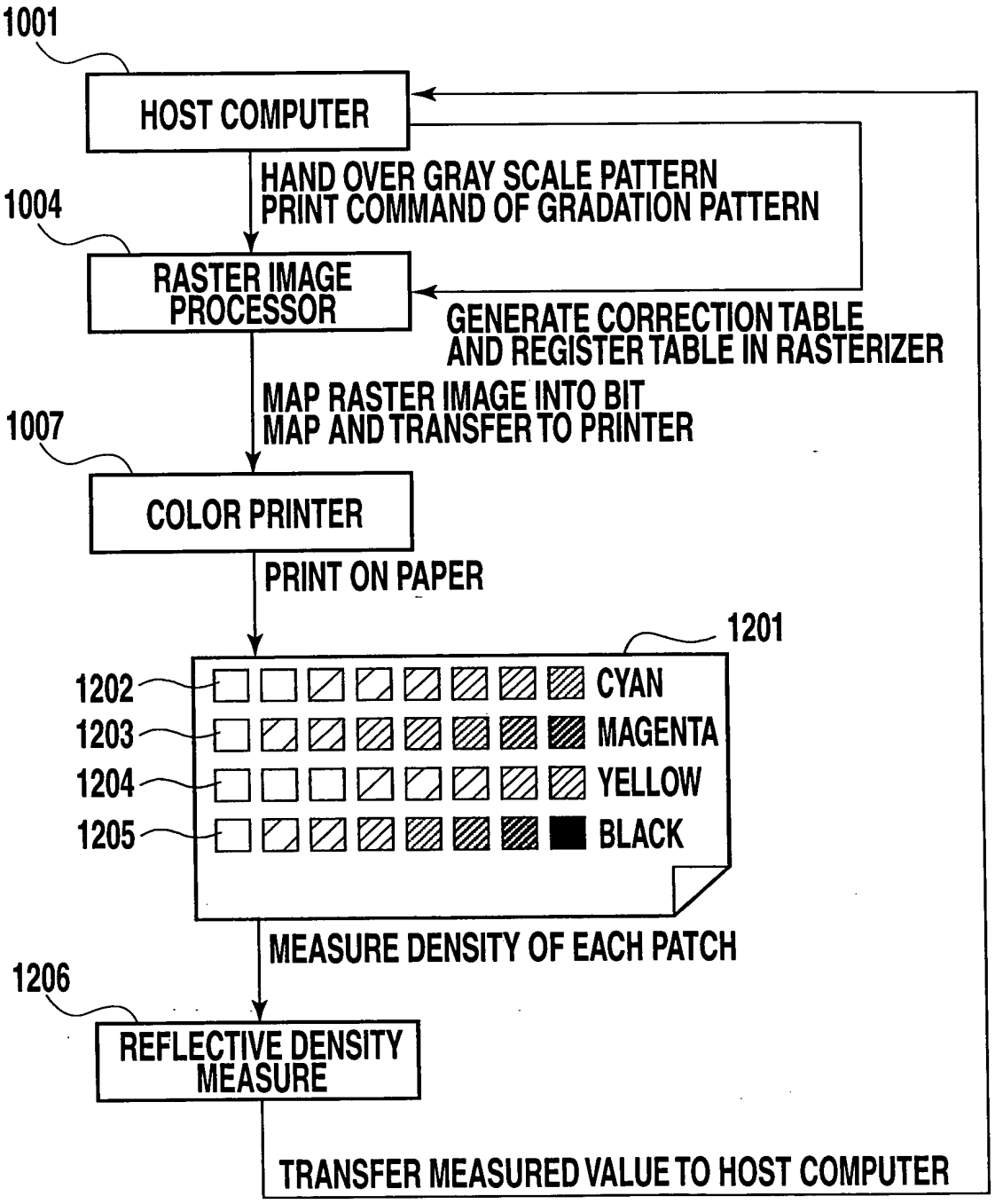
1001
HOST COMPUTER
HAND OVER GRAY SCALE PATTERN
PRINT COMMAND OF GRADATION PATTERN
1004
RASTER IMAGE PROCESSOR
GENERATE CORRECTION TABLE AND REGISTER TABLE IN RASTERIZER
MAP RASTER IMAGE INTO BIT MAP AND TRANSFER TO PRINTER
1007
COLOR PRINTER
PRINT ON PAPER
1201
1202
CYAN
1203
MAGENTA
1204
YELLOW
1205
BLACK
MEASURE DENSITY OF EACH PATCH
1206
REFLECTIVE DENSITY MEASURE
TRANSFER MEASURED VALUE TO HOST COMPUTER

FIG.3

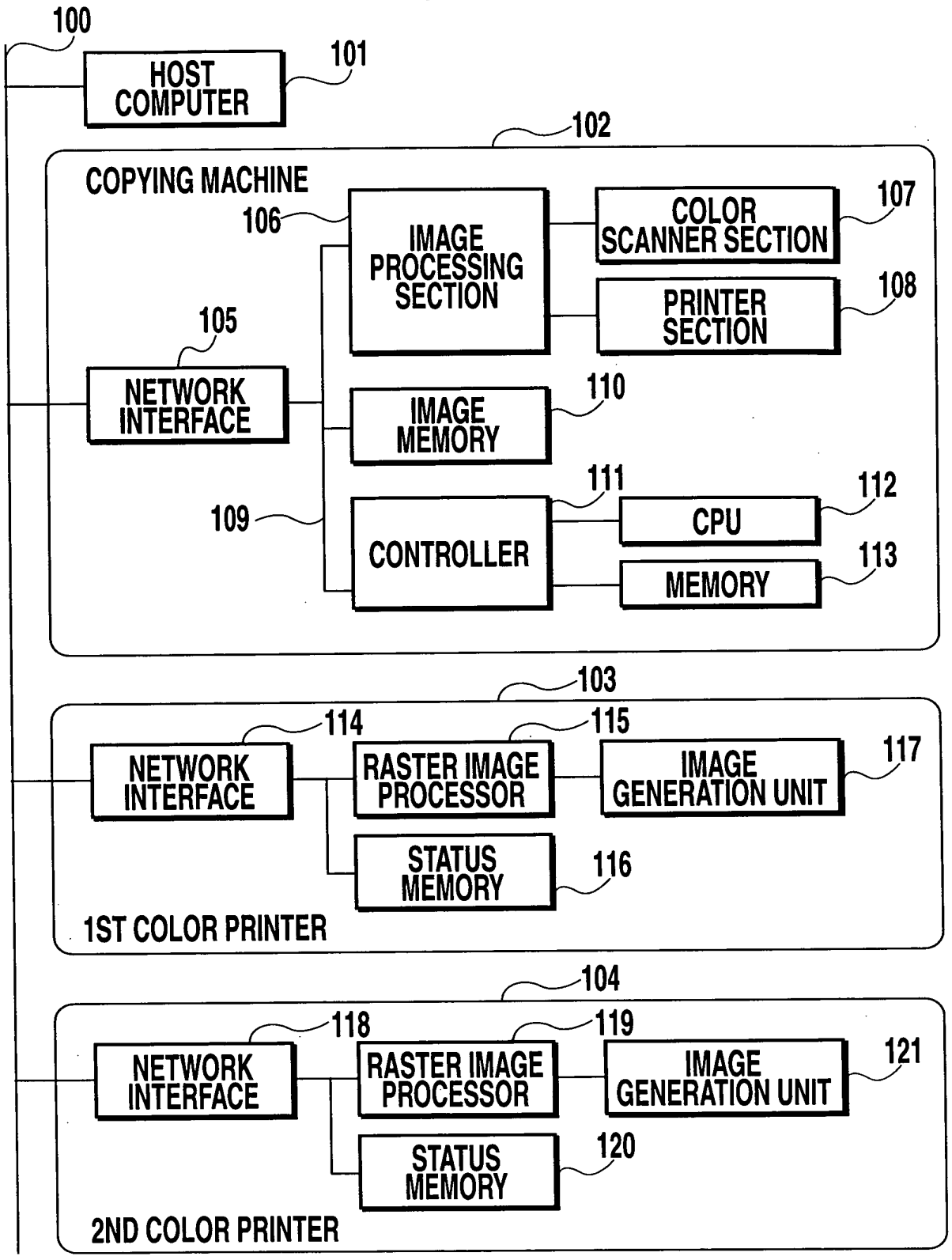
100
HOST COMPUTER
101
102
COPYING MACHINE
106
IMAGE PROCESSING SECTION
COLOR SCANNER SECTION
107
PRINTER SECTION
108
105
NETWORK INTERFACE
IMAGE MEMORY
110
109
CONTROLLER
111
CPU
112
MEMORY
113
103
114
NETWORK INTERFACE
115
RASTER IMAGE PROCESSOR
IMAGE GENERATION UNIT
117
STATUS MEMORY
116
1ST COLOR PRINTER
104
118
NETWORK INTERFACE
119
RASTER IMAGE PROCESSOR
IMAGE GENERATION UNIT
121
STATUS MEMORY
120
2ND COLOR PRINTER

FIG.4

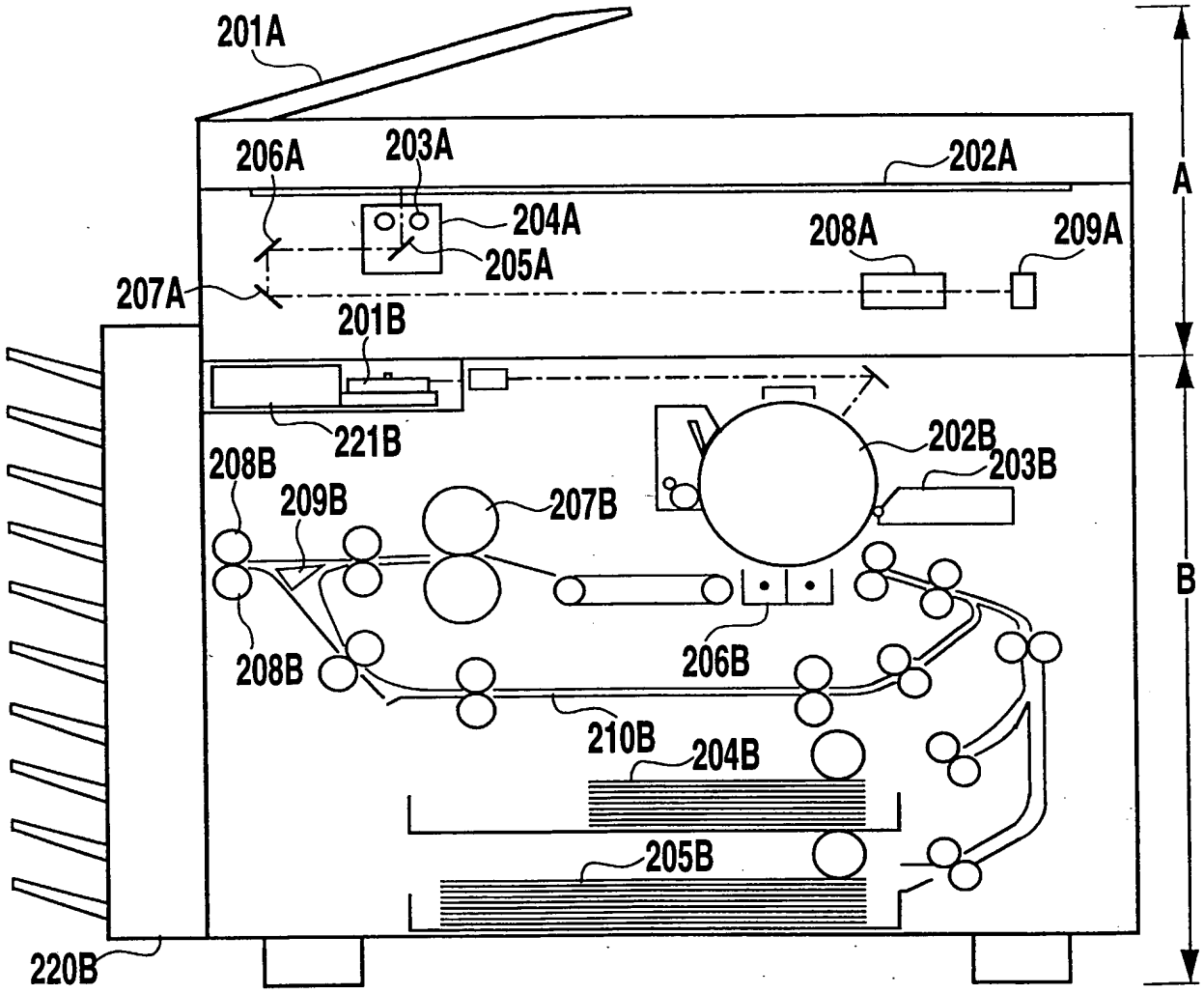
201A
206A
203A
202A
204A
205A
208A
209A
207A
201B
221B
208B
209B
207B
202B
203B
208B
206B
210B
204B
205B
220B
A
B

FIG.5

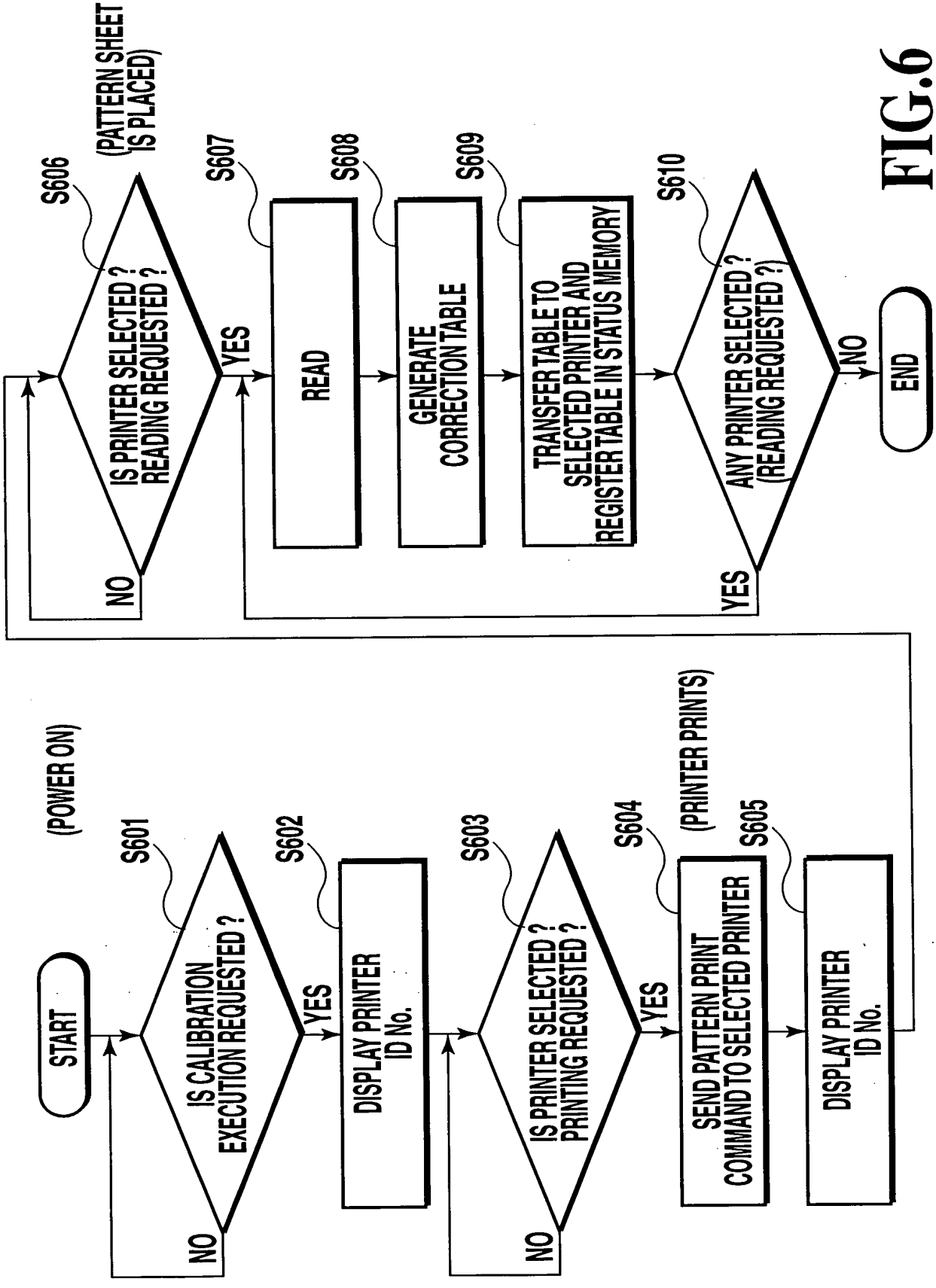
START
(POWER ON)
S601
IS CALIBRATION EXECUTION REQUESTED ?
NO
YES
S602
DISPLAY PRINTER ID No.
S603
IS PRINTER SELECTED ? PRINTING REQUESTED ?
NO
YES
S604
SEND PATTERN PRINT COMMAND TO SELECTED PRINTER
(PRINTER PRINTS)
S605
DISPLAY PRINTER ID No.
S606
IS PRINTER SELECTED ? READING REQUESTED ?
(PATTERN SHEET IS PLACED)
NO
YES
S607
READ
S608
GENERATE CORRECTION TABLE
S609
TRANSFER TABLE TO SELECTED PRINTER AND REGISTER TABLE IN STATUS MEMORY
S610
ANY PRINTER SELECTED ? (READING REQUESTED ?)
YES
NO
END

FIG.6

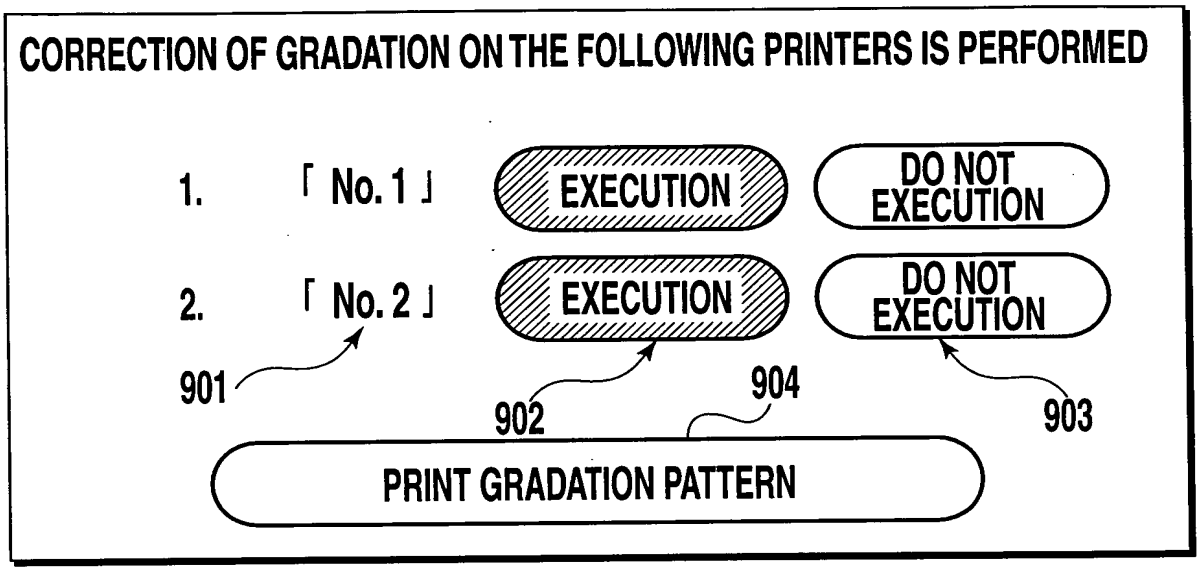
CORRECTION OF GRADATION ON THE FOLLOWING PRINTERS IS PERFORMED
1. 「No. 1」
EXECUTION
DO NOT EXECUTION
2. 「No. 2」
EXECUTION
DO NOT EXECUTION
901
902
903
904
PRINT GRADATION PATTERN

FIG.7A

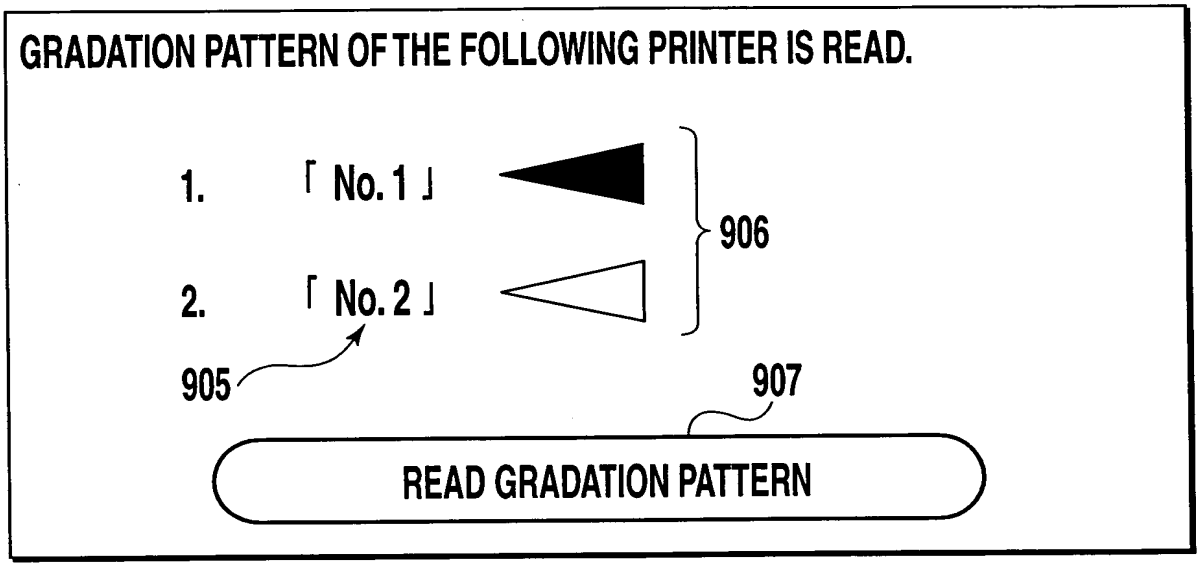
GRADATION PATTERN OF THE FOLLOWING PRINTER IS READ.
1. 「No. 1」
2. 「No. 2」
906
905
907
READ GRADATION PATTERN

FIG.7B

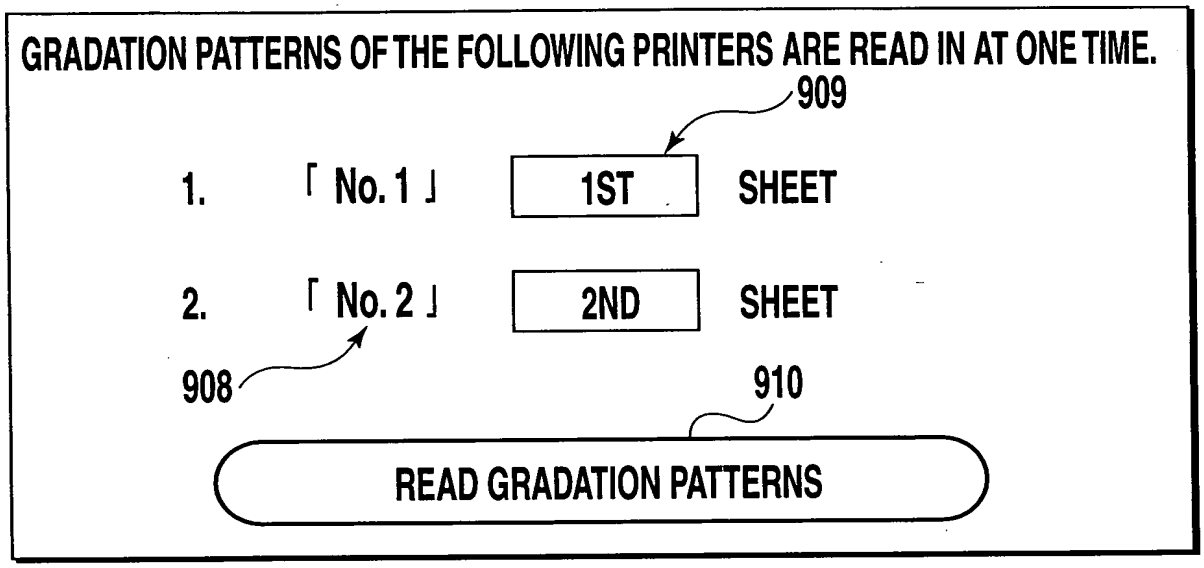
GRADATION PATTERNS OF THE FOLLOWING PRINTERS ARE READ IN AT ONE TIME.
909
1. 「No. 1」 1ST SHEET
2. 「No. 2」 2ND SHEET
908
910
READ GRADATION PATTERNS

FIG.7C

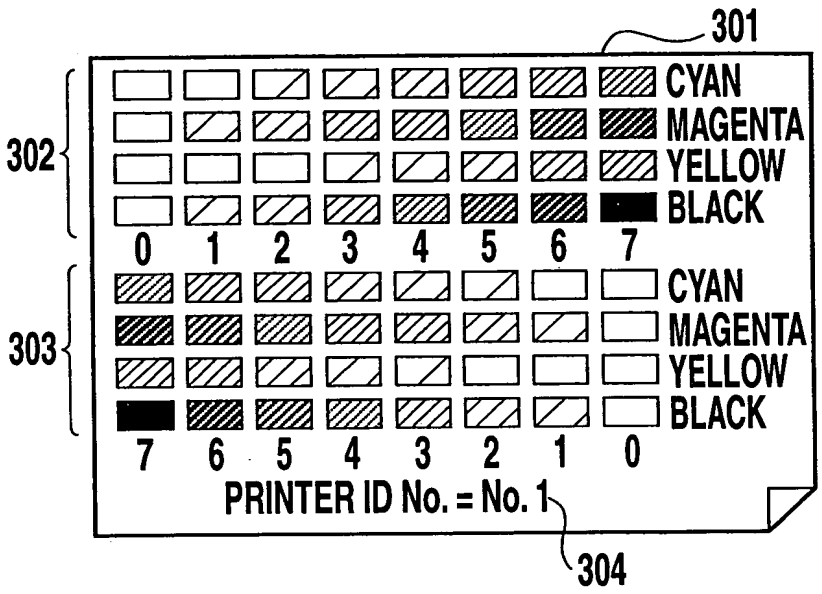
301
302
CYAN
MAGENTA
YELLOW
BLACK
0 1 2 3 4 5 6 7
303
CYAN
MAGENTA
YELLOW
BLACK
7 6 5 4 3 2 1 0
PRINTER ID No. = No. 1
304

FIG.8

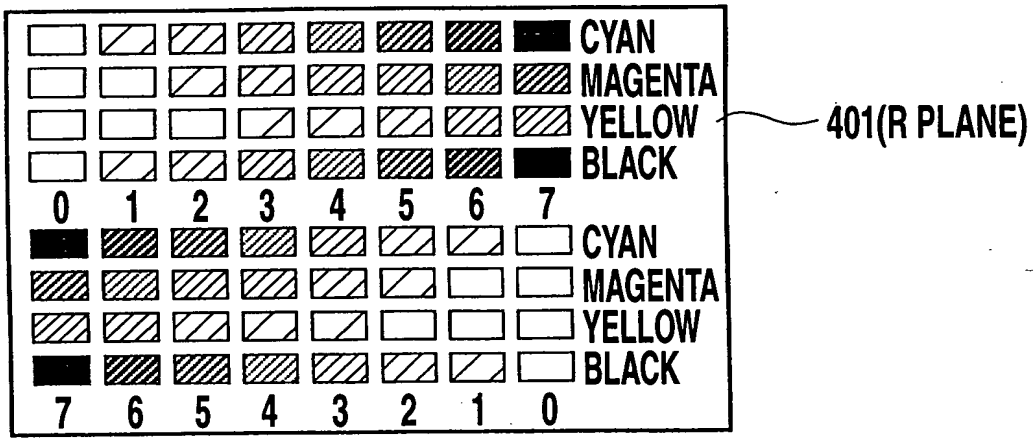
CYAN
MAGENTA
YELLOW
BLACK
401(R PLANE)
0 1 2 3 4 5 6 7
CYAN
MAGENTA
YELLOW
BLACK
7 6 5 4 3 2 1 0

FIG.9A

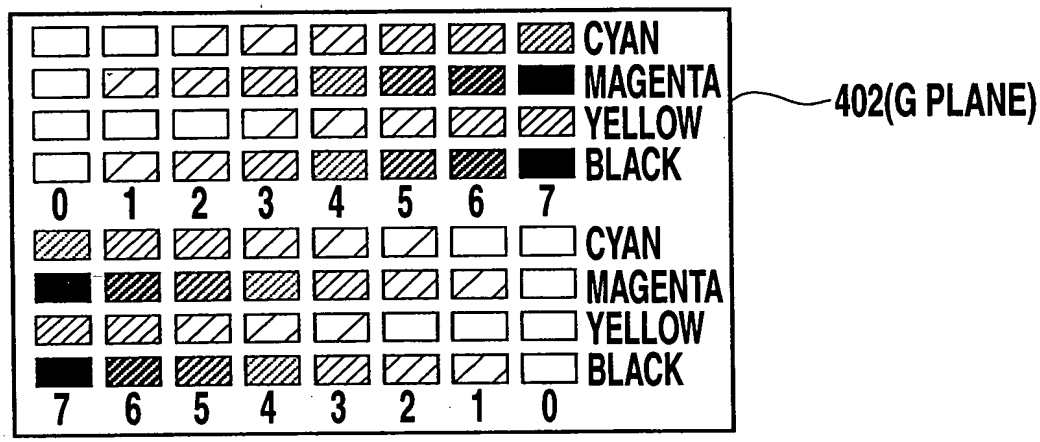
CYAN
MAGENTA
YELLOW
BLACK
0 1 2 3 4 5 6 7
CYAN
MAGENTA
YELLOW
BLACK
7 6 5 4 3 2 1 0
402(G PLANE)

FIG.9B

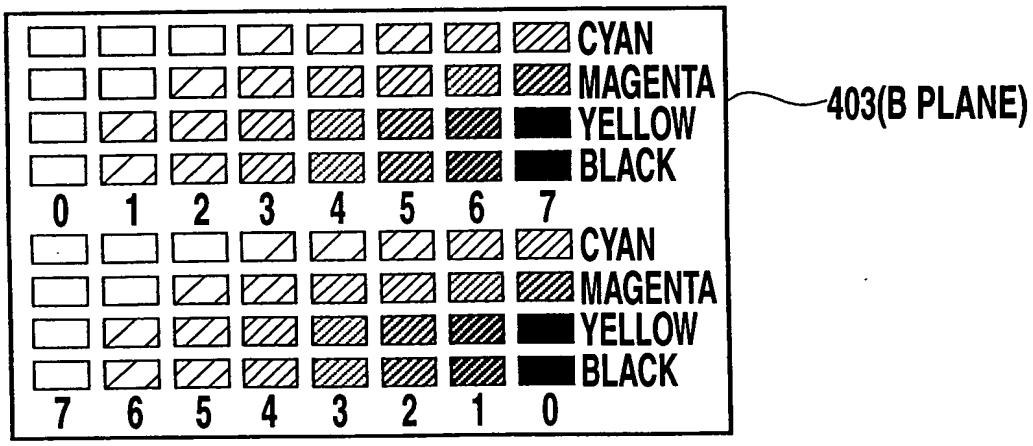
CYAN
MAGENTA
YELLOW
BLACK
0 1 2 3 4 5 6 7
CYAN
MAGENTA
YELLOW
BLACK
7 6 5 4 3 2 1 0
403(B PLANE)

FIG.9C

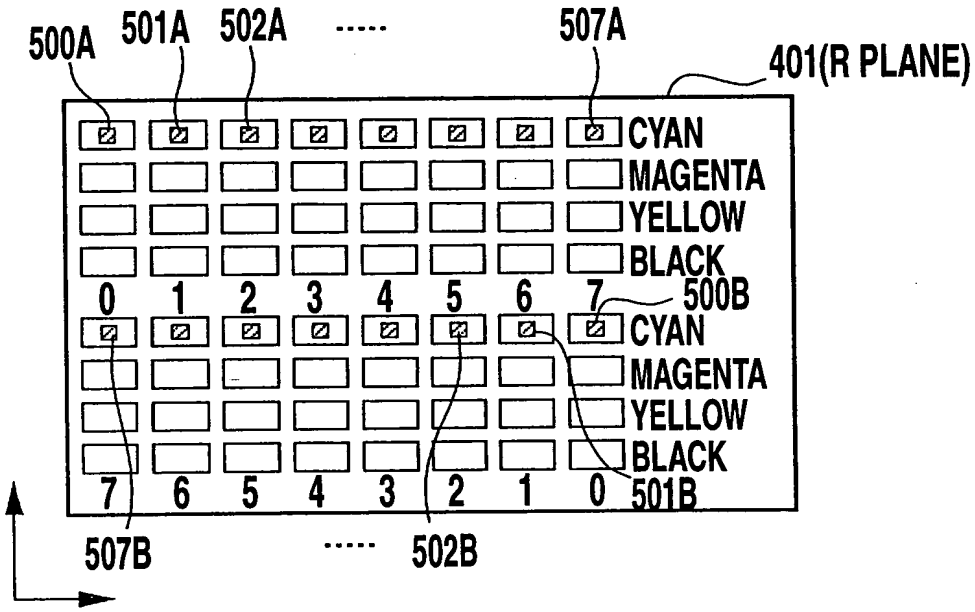
500A
501A
502A
.....
507A
401(R PLANE)
CYAN
MAGENTA
YELLOW
BLACK
0 1 2 3 4 5 6 7
500B
CYAN
MAGENTA
YELLOW
BLACK
7 6 5 4 3 2 1 0
501B
507B
.....
502B

FIG.10

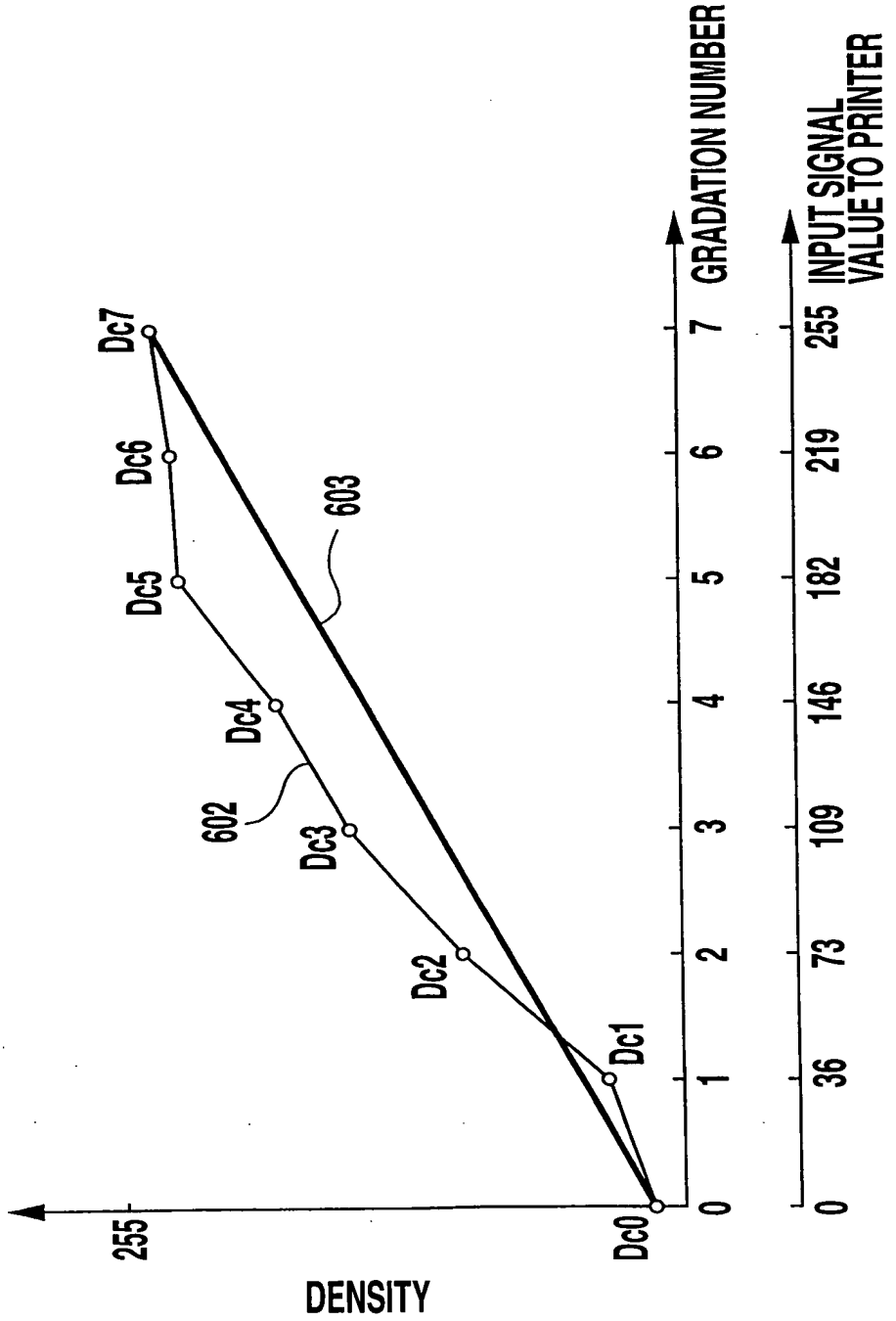
DENSITY
255
Dc0
Dc1
Dc2
Dc3
Dc4
Dc5
Dc6
Dc7
602
603
0
1
2
3
4
5
6
7
GRADATION NUMBER
0
36
73
109
146
182
219
255
INPUT SIGNAL VALUE TO PRINTER

FIG.11

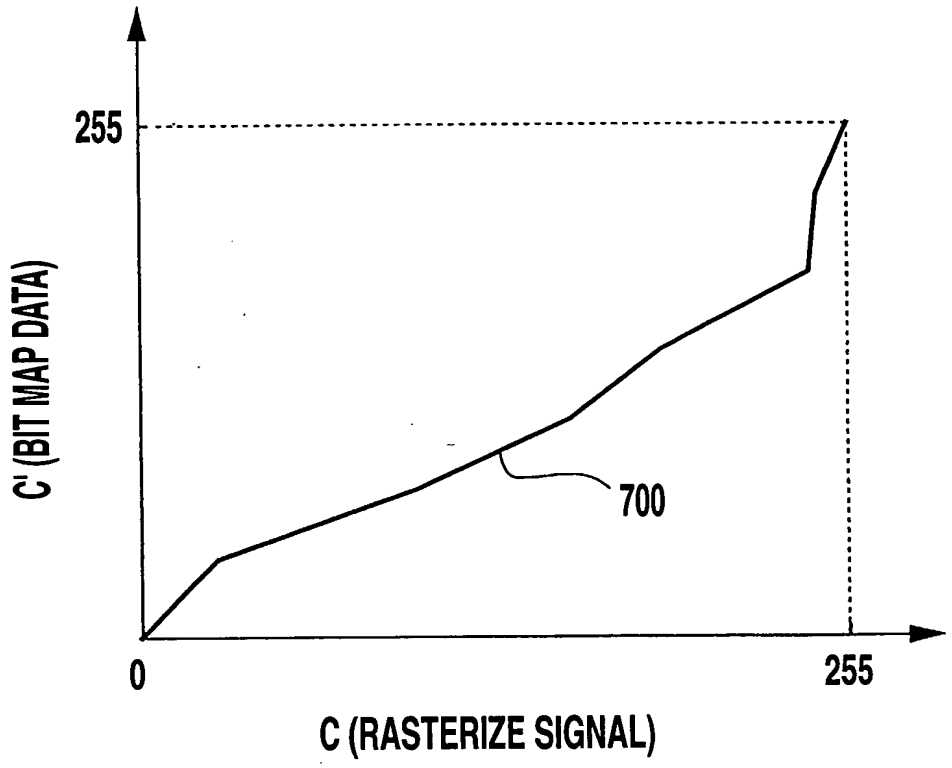

FIG.12

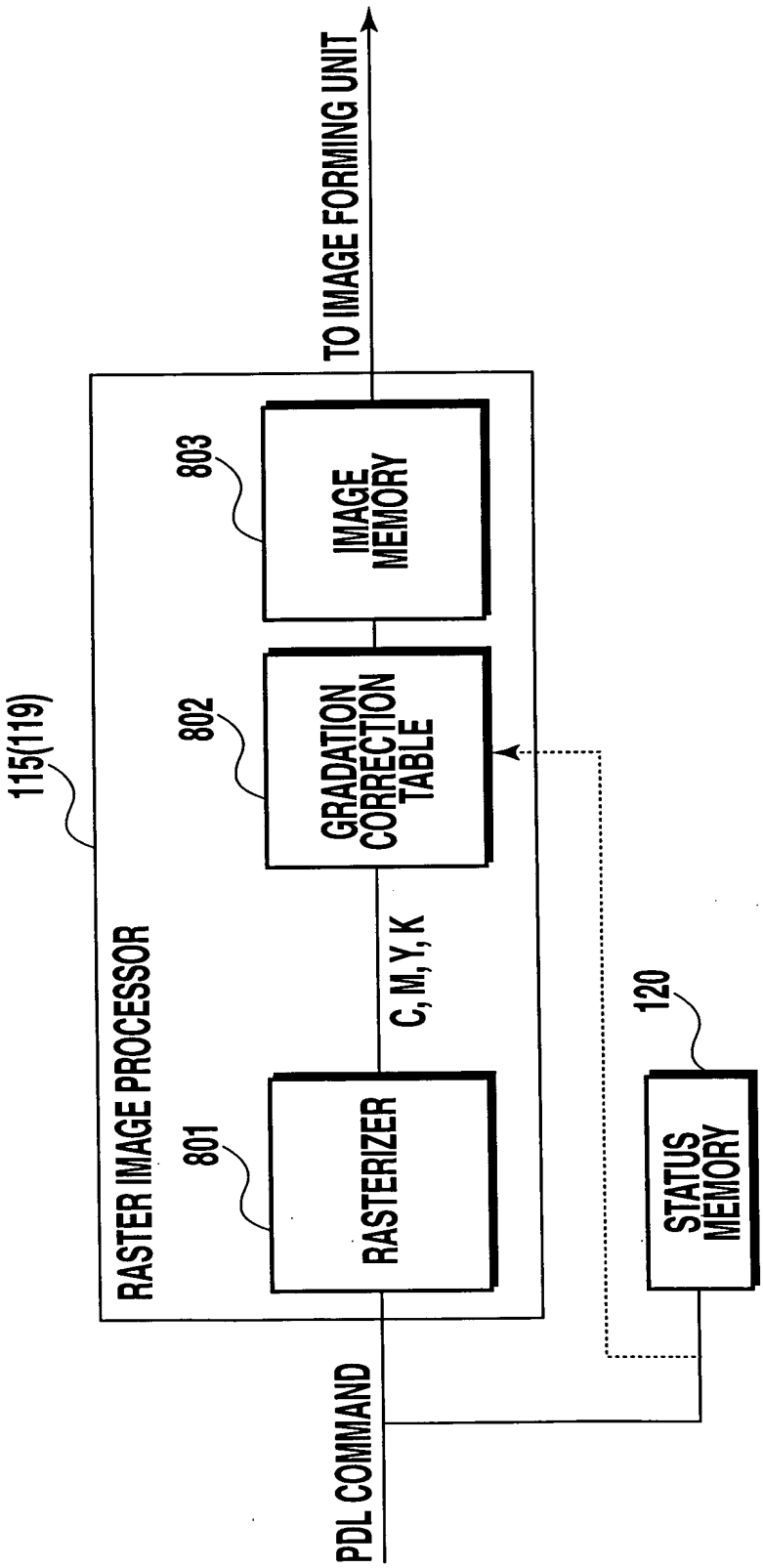
TO IMAGE FORMING UNIT
803
IMAGE MEMORY
802
GRADATION CORRECTION TABLE
115(119)
RASTER IMAGE PROCESSOR
C, M, Y, K
801
RASTERIZER
120
STATUS MEMORY
PDL COMMAND

FIG.13

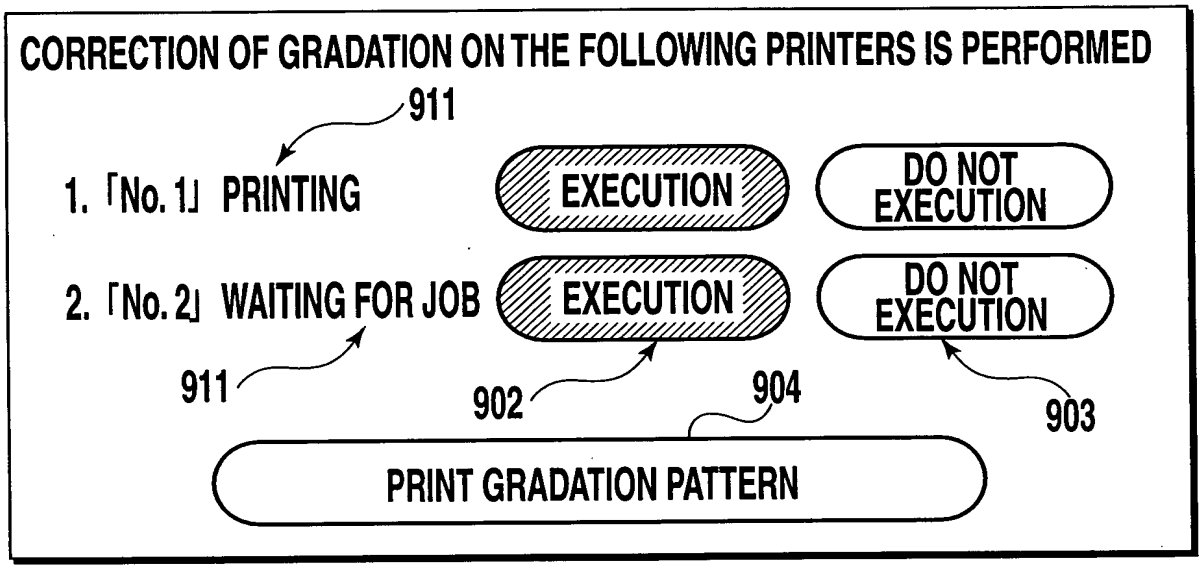
CORRECTION OF GRADATION ON THE FOLLOWING PRINTERS IS PERFORMED
911
1. 「No. 1」 PRINTING
EXECUTION
DO NOT EXECUTION
2. 「No. 2」 WAITING FOR JOB
EXECUTION
DO NOT EXECUTION
911
902
904
903
PRINT GRADATION PATTERN

FIG.14A

No. 1			
DOCUMENT NAME	STATUS	OWNER	SITUATION
A	PRINTING	B	***

FIG.14B

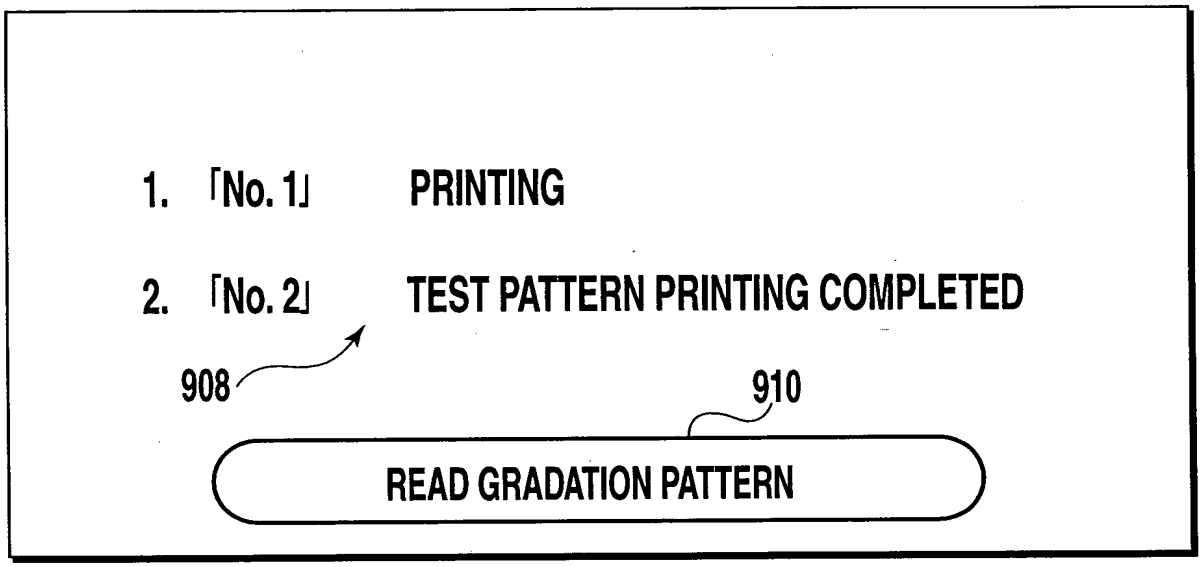
1. 「No. 1」 PRINTING
2. 「No. 2」 TEST PATTERN PRINTING COMPLETED
908
910
READ GRADATION PATTERN

FIG.14C